

SUMMARY

Tank Waste Remediation System (TWRS) Project consists of Management Support, Work Breakdown Structure (WBS) 1.1.1.1, Project Baseline Summary (PBS) TW10; Tank Farm Operations, WBS 1.1.2.1, PBS TW03; Tank Safety Issue Resolution, WBS 1.1.2.2, PBS TW02; Tank Waste Characterization, WBS 1.1.2.4, PBS TW01; Retrieval Project, WBS 1.1.3.1, PBS TW04; Immobilized Tank Waste Storage and Disposal, WBS 1.1.3.4, PBS TW09; Process Waste Support WBS 1.1.3.5, PBS TW05; Privatization Phase I and II, WBS 1.1.3.6 and 1.1.3.7, PBS TW06 and TW07; and, Privatization Infrastructure, WBS 1.1.3.8, PBS TW08.

Events occurring in the TWRS Project include the on schedule completion of the Readiness Assessment and declaration of readiness for Project W-058, "Cross Site Transfer Line." This effort supports Tri-Party Agreement Milestones M-43-07 (T03-98-162), "Complete Project W-058, Replacement of Cross-Site Transfer System," and M-43-07C (T03-98-161), "Cross Site Transfer System Operational," both due May 31.

Fiscal-year-to-date performance (EA, DOE-HQ, Field Office, and RL) shows ten milestones (67 percent) were completed on or ahead of schedule; three milestones (20 percent) were completed late; two milestones (13 percent) are overdue; and one milestone is forecast late. There is also one FY 1997 incomplete milestone. Details on the overdue and forecast late milestones can be found in the milestone exception report on page F:VI-1.

ACCOMPLISHMENTS

- Completed status report on Miscellaneous TWRS Facilities, Tanks, and Components one day ahead of schedule, HNF-2503. (Planned)
- Issued Tank-by-Tank Safety Status Evaluation Report on schedule. (Supports DNFSB 93-05/009.008 5.6.3.1h; T01-98-136)
- Issued Tank Characterization Technical Sampling Basis, HNF-SD-WM-TA-164, Revision 4. (Planned)
- Issued Revision D of Double Shell Tank Specification on March 6, behind schedule. (Supports completion of DNFSB Commitment 92-04/001 5.2.1a)
- Issued Baseline Comparison of the Double Shell Tank System Specification for Project W-211, "Initial Tank Retrieval System," Functional Design Criteria behind schedule. (Supports DNFSB Commitment 92-04/002 5.2.1b).
- Supported validation for Project W-464, "Immobilized High Level Waste Interim Storage Facility," and Project W-465, "Immobilized Low-Activity Waste Interim Storage Facility." (Planned)

COST PERFORMANCE (\$M)

	BCWP	ACWP	VARIANCE
TWRS	\$ 175.7	\$ 162.2	\$13.5

The 13.5 million (7.7 percent) favorable cost variance attributed to passback credits and efficiencies achieved by completing Gas Probe engineering change notices were completed by tank farm, instead of tank by tank; characterization project management, sampling and field activities; efficiencies in design and project management for Project W-211, "Initial Tank Retrieval System;" and common design packages for Project W-314, "Tank Farm Restoration and Safe Operations." Other contributors to the favorable cost variance are lower than planned Fluor Daniel Northwest rates, and late accruals for computer procurements and outside contractor commitments.

SCHEDULE PERFORMANCE (\$M)

	BCWP	BCWS	VARIANCE
TWRS	\$ 175.7	\$186.6	(\$10.9)

The \$10.9 million (5.9%) unfavorable schedule variance is within the negative 7.5 percent performance agreement threshold.

ISSUES

- 1) **Tank 241-SY-101.** This tank is exhibiting a slow rise in the surface level. Gas is most likely accumulating in or under the floating crust; recent tank surface level response to mixer pump operation is not consistent with behavior assumed in safety analysis.
Strategy/Status: The Advanced Work Authorization (AWA) was approved to proceed with the level growth work. BCR TWR-98-060 is awaiting final approval.
- 2) **Closure of Flammable Gas Unreviewed Safety Question (USQ).** Final decision of the strategy to close the Flammable Gas USQ (Tri-Party Agreement Milestone M-40-09) is required.
Strategy/Status: The recommendation being pursued is to close the Flammable Gas USQ administratively in accordance with RL Implementing Procedure 5480.21. Final decision on the recommendation is imminent.

- 3) **Potential Noncompliance with the Hazardous Waste Regulation.** There is a potential noncompliance with the Hazardous Waste Regulation due to the addition of waste to single shell tanks by transfer line flushing. This will further delay saltwell pumping (Tri-Party Agreement interim stabilization milestones).
Strategy/Status: Direction was issued to resume saltwell pumping as discussions with Ecology continue. Preparation to resume pumping is in process.

COST VARIANCE ANALYSIS: \$13.5M

WBS/PBS

Title

1.1.1.1/TW10

TWRS Management Support

Description and Cause: The \$2.2M (10.7%) favorable cost variance results from site indirect passback credits to costs received.

Impact: No impacts. The positive cost variance will be used to fund additional emerging scope in the final six months of the fiscal year.

Corrective Action: Change requests (TWR-98-056 Revision 2, FDH FY98 emerging work scope, and TWR-98-100, year 2000 remediation) were approved at the end of April 1998, but not implemented prior to month-end closing. The BCRs will be implemented in May.

1.1.2.2/TW02

Tank Safety Issue Resolution

Description and Cause: The \$3.0M (16.8%) favorable cost variance is due to allocation of resources for Organic Safety Issue Resolution activities (\$975K). Resources were level loaded; however, resource requirements will peak in July and August 1998, with a decline in September 1998. The remainder of the positive cost variance is related to earned value on underrun LOE tasks until BCR TWR-98-060 Revision 3, 241-SY-101 Surface Level Rise Issue, (submitted April 22, 1998) is approved and the budget revised (~\$1.4M).

Impact: No impacts. The positive cost variance will be reduced as work increases on the organic activities.

Corrective Action: None required. The positive cost variance related to the organic safety activities will diminish as work increases in the next few months. The remainder of the positive cost variance will be utilized through BCR TWR-98-060 Revision 3.

1.1.2.4/TW01

Tank Waste Characterization

Description and Cause: The \$6.5M (22.6%) favorable cost variance is due to negative passbacks (\$0.9M) and efficiencies in project management, sampling and field activities, and engineering. In addition, computer procurements are in arrears, and outside contractor commitments have not been fully utilized to date as originally planned.

Impact: No significant impacts. Funds are being reduced at midyear for realized efficiencies.

Corrective Action: Estimated costs at completion were developed to validate current costs to complete remaining planned work. The variance for contractor billings will be reduced as the contracts are fully utilized. The positive cost variance will be utilized as a source of funding to offset new scope and cost pressures for other TWRS Projects. Reallocation of funds is addressed in BCR TWR-98-104.

1.1.3.1/TW04

Retrieval Project

Description and Cause: The \$2.9M (9.0%) favorable cost variance is due to \$1.4M in passbacks, and \$1.9M in commitments for offsite fabrication services for Project W-211, "Initial DST Retrieval System". The remaining variance of \$1.4M is due to efficiencies in Project W-211 design and project management. Offsetting is a negative cost variance of \$1.0M due to increased resources requirements to complete readiness-to-proceed.

COST VARIANCE ANALYSIS: \$13.5M

WBS/PBS

Title

Impact: No impacts. The positive cost variance will be utilized in the remaining months of the fiscal year.

Corrective Action: The variance associated with the commitments will be eliminated as equipment is received and billed. The variance associated with efficiencies will be used to fund TWRS emerging work scope.

1.1.3.4/TW09 Immobilized Tank Waste

Description and Cause: The \$0.5M (11.5%) unfavorable cost variance is due to the pending approval of BCR TWR-98-043 for the 4.5 meter canister. Offsetting the negative cost variance is a positive cost variance due to receiving FDH rate reduction passbacks (\$0.2M).

Impact: No impact. The variance will become positive on approval of the BCR.

Corrective Action: Awaiting approval of the BCR.

1.1.3.5/TW05 Process Waste Support

Description and Cause: The \$0.6M (6.8%) favorable cost variance is due to FDH rate reduction passbacks (\$108K) and underruns. In addition, \$186K is due to resources planned, but not expended by Project W-519, "Privatization Phase I Infrastructure Support" and Feed Tank Turnover and lower than planned accruals for subcontractor work caused by late receipt of invoices from the vendors (\$224K). Efficiencies have been realized on the system definition support to ICD 22, "Air Emissions," and review of private contractor ICDs (\$163K). A negative cost variance exists as carryover work is being performed to dispose of a private contractor sample waste from FY 1997 waste treatability studies (\$118K).

Impact: Disposition of the sample waste return is pending. Underruns and passbacks will be used to fund TWRS emerging work scope.

Corrective Action: Use of resources for Project W-519 and Tank Turnover will increase after the Phase Ib contract award. Subcontractor invoicing is being expedited in order to obtain more timely accruals. BCR TWR-98-099 has been prepared to resolve the vendor sample return overrun.

SCHEDULE VARIANCE ANALYSIS: (\$10.9M)

WBS/PBS

Title

1.1.3.1/TW04 Retrieval Project

Description and Cause: The \$4.2M (11.6%) unfavorable schedule variance is attributed to the following four areas: (1) Delay in start of several feed process system definition tasks due to issues using the 324 Building which delayed settle decant testing, fewer alternative privatization scenarios were requested by RL than planned, and Chromium removal work has been placed on hold, pending deletion (\$1.3M); (2) Retrieval system definition was on hold pending an update to the current SST baseline (\$1.2M); (3) Delay in readiness assessment and the process test for Project W-151, "Tank 101-AZ Waste Retrieval System," as resources were diverted to support other higher priority work scope; specifically Project W-030, "Tank Farm Ventilation Upgrade" ORR and the Project W-058, "Cross Site Transfer System" readiness assessment (\$0.4M); (4) Delay in activities supporting the light-duty utility arm (LDUA) due to lack of operator availability, resolution of ALARA concerns for sample handling, and drawing configuration deficiencies (\$0.5M).

Impact: (1) Feed process system definition tasks have no impacts, as sufficient contingency exists and the remainder of the variance will be reduced through change control. 2) No impacts to retrieval system definition work, as the replanning will make work execution more efficient than previously planned. 3) Increased risk to Project W-151, such as possible pump failure, and design inadequacies due to lack of process test data. 4) The LDUA schedule slip is not recoverable; however, no baseline milestones are impacted.

Corrective Action: 1) Issues with the 324 Building have been resolved and settle decant testing will be completed by September 30. A BCR is being prepared to reduce the scope of the alternative scenario evaluation. BCR TWR-98-098 was approved to delete the Chromium removal work from the baseline. 2) BCR TWR-98-098 was approved and work is now on schedule. 3) Conduct the W-151 process test; forecast for November. 4) Replanning of the LDUA deployment schedule is currently being evaluated and a BCR is being prepared.

1.1.3.4/TW09 Immobilized Tank Waste

Description and Cause: The \$1.5M (24.7%) unfavorable schedule variance is due to pending approval of BCR TWR-98-043 for the 4.5 meter canister and delays in starting Project W-520, geotechnical data collection, and waste form simulations/testing.

Impact: The negative schedule variance will increase until BCR TWR-98-043 is approved. Project W-520, geotechnical data collection, and waste form simulations are expected to recover the schedule; as sufficient contingency exists. No milestones are impacted.

Corrective Action: Awaiting approval of BCR TWR-98-043. Schedule recovery is expected.

MILESTONE EXCEPTION REPORT

<u>No./WBS</u>	<u>Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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OVERDUE - 2

T03-98-151	EA	Start Interim Stabilization of Eight Single Shell Tanks (M-41-23)	03/31/98	06/01/99
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1.1.2.1

Cause: The milestone is behind schedule due to flammable gas issues.

Impact: Delay in Tri-Party Agreement interim stabilization milestones.

Corrective Action: Final determination on Tri-Party Agreement Change Request dispute received from Ecology on February 10, denying change request M-41-97-02. Recovery plan submitted to Ecology on April 15. Awaiting Ecology response; field work underway.

T04-98-161	EA	Initiate Sluicing Retrieval of C-106 (M-45-03A)	10/31/97	11/30/98
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1.1.3.1

Cause: This milestone is in dispute resolution. There are safety concerns with the receiving tank and excess steam.

Impact: Initiation of sluicing is delayed.

Corrective Action: Pollution Control Hearing Board Hearing is scheduled for June 1998. An alternate schedule was developed and activities are on schedule for September 30 completion.

FORECAST DELAY - 1

T03-98-152	EA	Start Interim Stabilization of Nine Single Shell Tanks (M-41-24)	09/30/98	07/05/2000
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1.1.2.1

Cause: The milestone is behind schedule due to flammable gas issues.

Impact: Delay in Tri-Party Agreement interim stabilization milestones.

Corrective Action: Final determination on Tri-Party Agreement Change Request dispute received from Ecology on February 10, denying change request M-41-97-02. Recovery plan submitted to Ecology on April 15. Awaiting Ecology response; field work underway.

FY 1997 OVERDUE - 1

T21-97-603	EA	Start Interim Stabilization of Six Single Shell Tanks	09/30/97	12/31/2049
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1.1.2.1

Cause: The milestone is behind schedule due to flammable gas issues.

Impact: Delay in Tri-Party Agreement interim stabilization milestones.

Corrective Action: Final determination on Tri-Party Agreement Change Request dispute received from Ecology on February 10, denying change request M-41-97-02. Recovery plan submitted to Ecology on April 15. Awaiting Ecology response; field work underway.